



Express Mail Label No.: EF371229510US
Date of Deposit: April 6, 2001

Attorney Docket No. 17564-145

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First-Named Inventor: Tang, Jie
Assignee: Fry's Metals, Inc.
For: APPARATUS AND METHOD FOR MAKING
UNIFORMLY SIZED AND SHAPED SHPERES
Original Patent No.: 5,891,212
Original Issue Date: April 6, 1999

Box REISSUE
Assistant Commissioner for Patents
Washington, D.C. 20231

**ESTABLISHING RIGHT OF ASSIGNEE TO CONSENT
TO APPLICATION FOR REISSUE PATENT
UNDER 37 C.F.R. §3.73(b)**

Sir:

The Assignee of the original patent identified above, Fry's Metals, Inc., provides its consent to file a reissue application. To establish ownership of the original patent, enclosed herewith are copies of the assignment documentation as filed with the Assignment Branch of the U.S. Patent and Trademark Office for recordation of the Assignee's ownership of the original patent. The assignment documentation establishes the transfer of ownership of the original patent from the conveying party, Eaton Aeroquip, Inc. to the Assignee, Fry's Metals, Inc., d/b/a Cookson Semiconductor Packaging Materials. The assignment documentation was recorded on October 30, 2000, at Reel/Frame No. 011231/0001.

Also enclosed herewith is a copy of a Dialog database record of the original patent establishing the transfer of ownership of the original patent from the inventors to Aeroquip, Inc. on September 12, 1997.

09827605-040601

First-Named Inventor: [REDACTED]

Request for Application for Reissue of Original Patent No.5,891,212

The undersigned is a person authorized to act on behalf of the Assignee.

Respectfully submitted,

FRY'S METALS, INC. d/b/a

Cookson Semiconductor Packaging Materials

Date: April 5, 2001

Keith F. Noe

Name: Keith F. Noe

Title: Assistant Secretary

09827605-040601



Express Mail Label No.: EF371229510US
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Attorney Docket No. 17564-145

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First-Named Inventor: Tang, Jie
Assignee: Fry's Metals, Inc.
For: APPARATUS AND METHOD FOR MAKING
UNIFORMLY SIZED AND SHAPED SHPERES
Original Patent No.: 5,891,212
Original Issue Date: April 6, 1999

Box REISSUE
Assistant Commissioner for Patents
Washington, D.C. 20231

**CONSENT OF ASSIGNEE FOR APPLICATION FOR
REISSUE PATENT UNDER 37 C.F.R. §1.172**

Sir:

The Assignee of an undivided interest in the original patent identified above is Fry's Metals, Inc. The Assignee consents to the accompanying application for a reissue patent. A statement under 37 C.F.R. §3.73(b) to establish ownership of the original patent is filed herewith. The undersigned is a person authorized to act on behalf of the Assignee.

Respectfully submitted,
FRY'S METALS, INC. d/b/a
Cookson Semiconductor Packaging Materials

Date: April 5, 2001

Keith F. Noe
Name: Keith F. Noe
Title: Assistant Secretary



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First-Named Inventor: Tang, Jie
Assignee: Fry's Metals, Inc.
For: APPARATUS AND METHOD FOR MAKING
UNIFORMLY SIZED AND SHAPED SHPERES
Original Patent No.: 5,891,212
Original Issue Date: April 6, 1999

Box REISSUE
Assistant Commissioner for Patents
Washington, D.C. 20231

**OFFER BY ASSIGNEE TO SURRENDER
ORIGINAL PATENT UNDER 37 C.F.R. §1.178(a)**

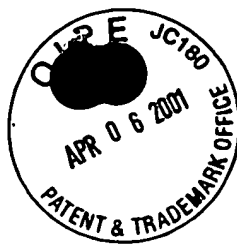
Sir:

The Assignee hereby offers to surrender the original patent identified above as the original patent grant or, if the original patent grant is lost or inaccessible, by a statement to that effect. The Assignee will surrender the original patent on or before the allowance of this application for reissue of the original patent. The undersigned is a person authorized to act on behalf of the Assignee.

Respectfully submitted,
FRY'S METALS, INC. d/b/a
Cookson Semiconductor Packaging Materials

Date: April 5, 2001

Keith F. Noe
Name: Keith F. Noe
Title: Assistant Secretary



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JANUARY 16, 2001

PTAS

MINTZ, LEVIN ET AL.
CAROL H. PETERS
ONE FINANCIAL CENTER
BOSTON, MA 02111



UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/30/2000

REEL/FRAME: 011231/0001
NUMBER OF PAGES: 8

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

EATON AEROQUIP INC.

DOC DATE: 09/29/2000

ASSIGNEE:

FRY'S METALS, INC. D/B/A COOKSON
SEMICONDUCTOR PACKAGING
MATERIALS
225 FOXBOROUGH BOULEVARD
SUITE 150
FOXBOROUGH, MASSACHUSETTS 02035

SERIAL NUMBER: 08931295
PATENT NUMBER: 5891212

FILING DATE: 09/16/1997
ISSUE DATE: 04/06/1999

SERIAL NUMBER: 09212555
PATENT NUMBER: 6083454

FILING DATE: 12/16/1998
ISSUE DATE: 07/04/2000

Date By	
<input type="checkbox"/> Date Entry	_____
<input type="checkbox"/> Docket Entry	_____
<input type="checkbox"/> Docket Entry of	_____
<input type="checkbox"/> Patent Office	_____
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<input type="checkbox"/> Patent Office	_____
<input type="checkbox"/> Patent Office	_____
<input type="checkbox"/> Patent Office	_____

RECEIVED

JAN 24 2001

MINTZ LEVIN, BOSTON
PATENT DOCKET DEPT.

011231/0001 PAGE 2

STEVEN POST, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

09827605-040601

Express Mail Label No. EJ770264493
Date of Deposit: October 30 2000

11-15-2000



Attorney Docket No. 17564-130

FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

101517551

RECORDATION FORM COVER SHEET
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Eaton Aeroquip Inc.
(formerly known as Aeroquip Corporation)
3000 Strayer Road
Maumee, OH 43537

2. Name and address of receiving party(ies)

Name: Fry's Metals, Inc.
d/b/a Cookson Semiconductor Packaging Materials

Internal Address:

Street Address:

225 Foxborough Boulevard
Suite 150
Foxborough, MA 02035

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other

Execution Date: September 29, 2000

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is _____

A. Patent Application No(s):

B. Patent No(s):

5,891,212
6,083,454

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence
Concerning document should be mailed:

Name: Carol H. Peters
Address: MINTZ, LEVIN, COHN, FERRIS
GLOVSKY and POPEO, P.C.
One Financial Center
Boston, MA 02111

6. Total number of patents involved: [2]

7. Total fee (37 CFR 3.41) \$80.00

- ☒ Enclosed
☐ The Commissioner is authorized to charge Deposit Account
No: 50-0311, Reference No. 17564-130.

DO NOT USE THIS SPACE

9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Carol H. Peters, Reg. No. 45,010

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: [6]

Mail documents to be recorded with required cover sheet information to:

11/09/2000 00000068 5891212

01 FC:581

80.00 DP

BOX ASSIGNMENT
Commissioner of Patents and Trademarks
Washington, D.C. 20231

TRADOCS:1392529.1(T%HD01!.DOC)

ASSIGNMENT OF PATENTS AND PATENT APPLICATIONS

WHEREAS, Eaton Aeroquip Inc. (formerly known as Aeroquip Corporation), a corporation organized under the laws of the State of Michigan, U.S.A. having principal offices at 3000 Strayer Road, Maumee, Ohio 43537 (hereinafter "Assignor"), is the owner of Letters Patents, Patent Applications, Inventions and Trade Secrets, which are specifically identified and listed in Schedule A, Schedule B and Schedule C, attached hereto, incorporated herein and made a part hereof; and

WHEREAS, Fry's Metals, Inc. (d/b/a Cookson Semiconductor Packaging Materials), a corporation organized under the laws of the State of Delaware, U.S.A. having offices at 225 Foxborough Blvd., Suite 150, Foxborough, Massachusetts 02035 (hereinafter "Assignee"), is desirous of acquiring all of Assignor's right, title and interest in the Patents, Patent Applications, Inventions and Trade Secrets specifically identified and listed in Schedule A, Schedule B and Schedule C including its right to sue for and collect for past infringement thereof;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which by Assignor is hereby acknowledged, and intending to be legally bound hereby, the Assignor does hereby sell, assign, transfer and set over unto the Assignee its entire right, title and interest in and to, respectively, the Patents identified in Schedule A hereto, and any and all reissues and extensions thereof, including Assignor's right to sue for and collect damages and other recoveries for past infringement thereof; and the Patent Applications identified in Schedule B hereto, and any and all divisions, continuations and continuations-in-part thereof; the same to be held and enjoyed by the Assignee successors and assigns, as fully as the same would have been held and enjoyed by the Assignor had this Assignment not been made; and the Inventions and Trade Secrets identified in Schedule C hereto.

And for the consideration aforesaid, Assignor agrees that it will, upon request, execute and deliver to Assignee any and all additional papers and generally do all other and further lawful acts deemed necessary by said Assignee to carry out the terms of this Assignment.

[signature page follows]

EXECUTED this 29 day of September, 2000.

EATON AEROQUIP INC.

By: Sydney M. Burns

Title: Director - Business Development

By: Daniel E. Kemmet

Title: Vice President - Aeroquip Operations

STATE OF OHIO)

COUNTY OF LUCAS) SS:

The foregoing instrument was acknowledged before me in the City of Mansfield, this 29th day of Sept, 2000, by Sydney M. Burns, Director Business Development and Daniel E. Kemmet, VP Aeroquip Operations of Eaton Aeroquip Inc., a Michigan U.S.A. corporation, on behalf of the corporation.

Pamela R. Reed
Notary Public

My Commission Expires:

PAMELA R. REED

Notary Public, State of Ohio

My Commission Expires August 7, 2002

(Seal)

109827605.040601

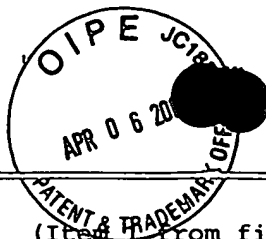


SCHEDULE A – PATENTS

Page 1 of 1

<u>PATENT NO.</u>	<u>ISSUE DATE</u>	<u>COUNTRY</u>	<u>SERIAL NO.</u>
US 5,891,212	04/06/99	U.S.A.	08/931,295
US 6,083,454	07/04/00	U.S.A.	09/212,555
TW 108208	11/01/99	Taiwan	87111398

09827605.040601



1/9/1 (Item from file: 345)
 16274456
 Basic Patent (No,Kind,Date): WO 9903626 A1 19990128

PATENT FAMILY:
 CHINA (CN)

Patent (No,Kind,Date): CN 1262636 T 20000809
 APPARATUS AND METHOD FOR MAKING UNIFORMLY SIZED AND SHAPED SPHERES
 (English)
 Patent Assignee: AEROQUIP CORP (US)
 Author (Inventor): TANG J (US); HESS G B (US); MUSZYNSKI M D (US)
 Priority (No,Kind,Date): US 892145 A 19970714; US 931295 A
 19970916
 Applic (No,Kind,Date): CN 98807037 A 19980605
 IPC: * B22F-009/08; B01J-002/18
 Language of Document: Chinese

EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 996521 A1 20000503
 APPARATUS AND METHOD FOR MAKING UNIFORMLY SIZED AND SHAPED SPHERES
 (English; French; German)
 Patent Assignee: AEROQUIP CORP (US)
 Author (Inventor): TANG JIE (US); HESS GARY B (US); MUSZYNSKI MARK D
 (US); GOEHRING THOMAS S (US)
 Priority (No,Kind,Date): WO 98US11588 W 19980605; US 892145 A
 19970714; US 931295 A 19970916
 Applic (No,Kind,Date): EP 98925258 A 19980605
 Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;
 IE; IT; LI; NL; SE
 IPC: * B22F-009/08; B01J-002/18
 Language of Document: English

EUROPEAN PATENT OFFICE (EP)

Legal Status (No,Type,Date,Code,Text):

EP 996521	P	19970714	EP AA	PRIORITY (PATENT APPLICATION)	(PRIORITAET (PATENTANMELDUNG))
				US 892145 A	19970714
EP 996521	P	19970916	EP AA	PRIORITY (PATENT APPLICATION)	(PRIORITAET (PATENTANMELDUNG))
				US 931295 A	19970916
EP 996521	P	19980605	EP AA	PCT-APPLICATION	
				(PCT-ANMELDUNG)	
				WO 98US11588 W	19980605
EP 996521	P	19980605	EP AE	EP-APPLICATION	
				(EUROPAEISCHE ANMELDUNG)	
				EP 98925258 A	19980605
EP 996521	P	20000503	EP AK	DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH REPORT:	
				(IN EINER ANMELDUNG BENANNTE VERTRAGSSTAATEN)	
				AT BE CH CY DE DK ES FI FR GB IE IT LI NL SE	
EP 996521	P	20000503	EP A1	PUBLICATION OF APPLICATION WITH SEARCH REPORT	(VEROEFFENTLICHUNG DER ANMELDUNG MIT RECHERCHENBERICHT)
EP 996521	P	20000503	EP 17P	REQUEST FOR EXAMINATION FILED	(PRUEFUNGSANTRAG GESTELLT)
				19991217	
EP 996521	P	20000830	EP RIN1	INVENTOR (CORRECTION)	
				(ERFINDER (KORR.))	
				TANG, JIE ; HESS, GARY, B. ; MUSZYNSKI, MARK, D. ; GOEHRING, THOMAS, S.	

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5891212 A 19990406
 APPARATUS AND METHOD FOR MAKING UNIFORMLY (English)
 Patent Assignee: AEROQUIP CORP (US)
 Author (Inventor): TANG JIE (US); HESS GARY B (US); MUSZYNSKI MARK D
 (US); GOEHRING THOMAS S (US)
 Priority (No,Kind,Date): US 931295 A 19970916; US 892145 B2

09827605-040601

19970714

Applic (No,Kind,Date): US 931295 A 19970916

National Class: * 075335000; 075345000; 264009000

IPC: * B06B-001/20

Language of Document: English

Patent (No,Kind,Date): US 6083454 A 20000704

APPARATUS AND METHOD FOR MAKING UNIFORMLY SIZED AND SHAPED SPHERES

(English)

Patent Assignee: AEROQUIP CORP (US)

Author (Inventor): TANG JIE (US); HESS GARY B (US); MUSZYNSKI MARK D

(US); GOEHRING THOMAS S (US)

Priority (No,Kind,Date): US 212555 A 19981216; US 931295 A3

19970916; US 892145 B2 19970714

Applic (No,Kind,Date): US 212555 A 19981216

Addnl Info: 5891212 Patented

National Class: * 266202000; 222593000

IPC: * G21C-001/00

Language of Document: English

UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):

US 5891212 P 19970714 US AA PRIORITY

US 892145 B2 19970714

US 5891212 P 19970916 US AE APPLICATION DATA (PATENT)

(APPL. DATA (PATENT))

US 931295 A 19970916

US 5891212 P 19970916 US AS02 ASSIGNMENT OF ASSIGNOR'S

INTEREST

AEROQUIP CORPORATION 3000 STRAYER ROAD

MAUMEE, OHIO 43537 ; TANG, JIE : 19970912;

HESS, GARY B. : 19970912; MUSZYNSKI, MARK D.

: 19970912; GOEHRING, THOMAS S. : 19970912

US 5891212 P 19990406 US A PATENT

US 5891212 P 19990907 US CC CERTIFICATE OF CORRECTION

US 6083454 P 19970714 US AA PRIORITY

US 892145 B2 19970714

US 6083454 P 19970916 US AA PRIORITY

US 931295 A3 19970916

US 6083454 P 19981216 US AE APPLICATION DATA (PATENT)

(APPL. DATA (PATENT))

US 212555 A 19981216

US 6083454 P 20000704 US A PATENT

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 9903626 A1 19990128

APPARATUS AND METHOD FOR MAKING UNIFORMLY SIZED AND SHAPED SPHERES

(English)

Patent Assignee: AEROQUIP CORP (US)

Author (Inventor): TANG JIE; HESS GARY B; MUSZYNSKI MARK D; GOEHRING

THOMAS S

Priority (No,Kind,Date): US 892145 A 19970714; US 931295 A

19970916

Applic (No,Kind,Date): WO 98US11588 A 19980605

Designated States: (National) CN; JP; KR; SG (Regional) AT; BE; CH;

CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE

Filing Details: WO 100000 With international search report

IPC: * B22F-009/08; B01J-002/18

Language of Document: English

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Legal Status (No,Type,Date,Code,Text):

WO 9903626 P 19970714 WO AA PRIORITY (PATENT)

US 892145 A 19970714

WO 9903626 P 19970916 WO AA PRIORITY (PATENT)

US 931295 A 19970916

WO 9903626 P 19980605 WO AE APPLICATION DATA (APPL.

DATA)

WO 98US11588 A 19980605

WO 9903626 P 19990128 WO AK DESIGNATED STATES CITED IN A

PUBLISHED APPLICATION WITH SEARCH REPORT

(DESIGNATED STATES CITED IN A PUBLISHED APPL.

T09827605-1040601

WITH SEARCH REPORT)
CN JP KR SG

WO 9903626 P 19990128 WO AL DESIGNATED COUNTRIES FOR
REGIONAL PATENTS CITED IN A PUBLISHED
APPLICATION WITH SEARCH REPORT (DESIGNATED
COUNTRIES FOR REGIONAL PATENTS CITED IN A
PUBLISHED APPL. WITH SEARCH REPORT)
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
NL PT SE

WO 9903626 P 19990128 WO A1 PUBLICATION OF THE
INTERNATIONAL APPLICATION WITH THE
INTERNATIONAL SEARCH REPORT (PUB. OF THE
INTERNATIONAL APPL. WITH THE INTERNATIONAL
SEARCH REPORT)

WO 9903626 P 19990512 WO 121 EP: PCT APP. ART. 158 (1)
(EP: PCT ANM. ART. 158 (1))

WO 9903626 P 19990701 WO DFPE REQUEST FOR PRELIMINARY
EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH
MONTH FROM PRIORITY DATE

Inpadoc/Fam.& Legal Stat (Dialog® File 345): (c) 2001 EPO. All rights reserved.

1/9/2 (Item 1 from file: 123)

3133225

Status Changes:

REASSIGNED

Assignee:
Aeroquip Corp (
REASSIGNED
)

Patent	Issue
Number	Date

Patent:
US 5891212

19990406

Reassignment:

Recorded: 20001030
Action: ASSIGNMENT OF ASSIGNOR'S INTEREST

Assignor: EATON AEROQUIP INC. DATE SIGNED: 09/29/2000
Assignee: FRY'S
METALS, INC. D/B/A COOKSON SEMICONDUCTOR PACKAGING MATERIALS SUITE 150 225
FOXBOROUGH BOULEVARD FOXBOROUGH, MASSACHUSETTS 02035
Reel: 011231
Frame: 0001
Contact: MINTZ, LEVIN ET AL. CAROL H. PETERS ONE
FINANCIAL CENTER BOSTON, MA 02111

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